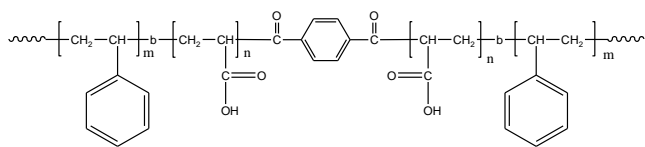
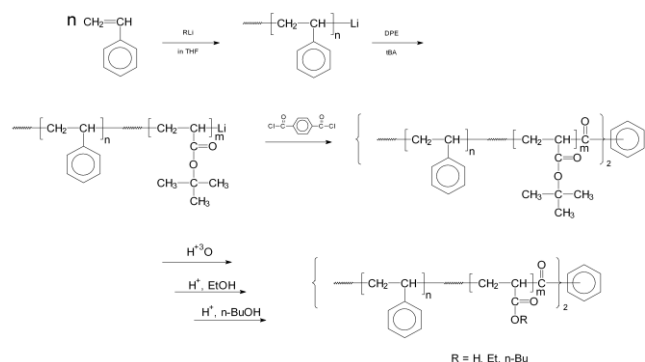


Sample Name:**Poly(Styrene-b-acrylic acid-b-Styrene)****Sample #: P8870-SAAS****Structure:****Composition:**

Mn x 10 ³ (S-b-AA-b-S)	PDI
3.0-b-8.0-b-3.0	1.35
T _g for PS block:	103°C
T _g for AA block:	129°C

Synthesis Procedure:

Poly(styrene-b-tert. butylacrylate-b-styrene) is prepared by living anionic polymerization. The details are available in the cited reference. The scheme of the reaction is illustrated below:

**Characterization:**

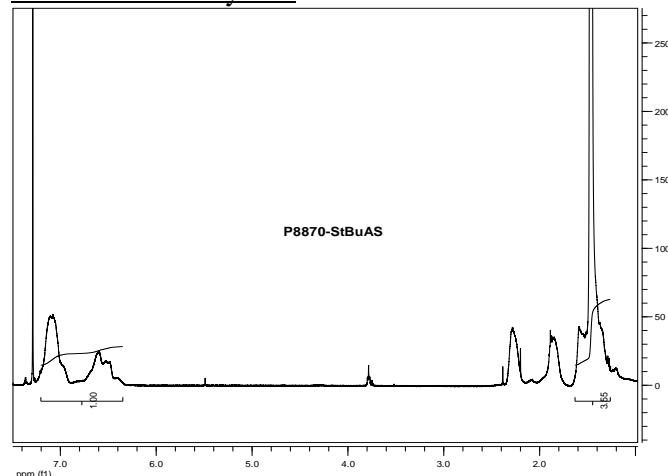
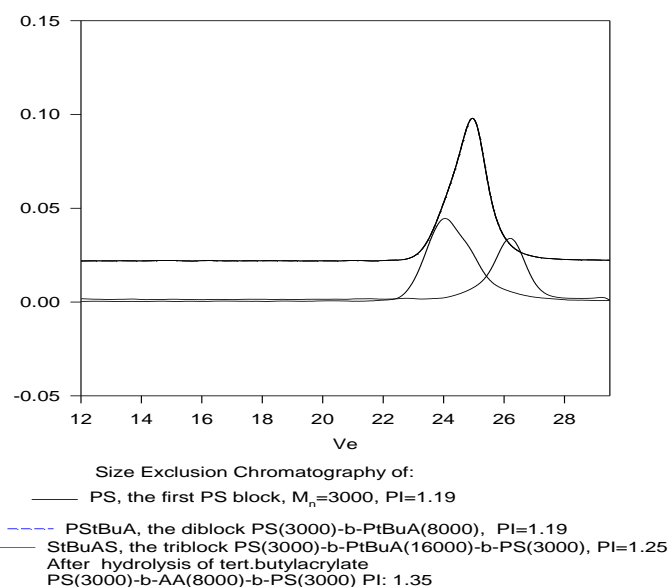
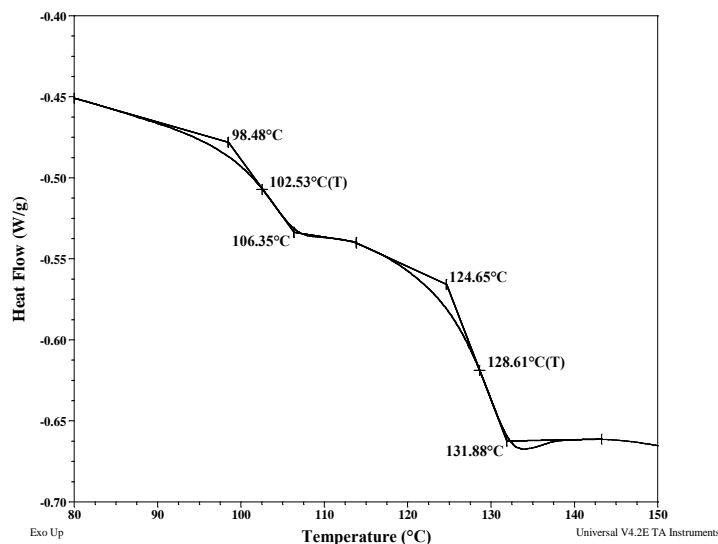
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

Thermal analysis:

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Polymer is soluble in THF, toluene and CHCl₃. It precipitates from methanol, ethanol, water and hexanes (depending on the compositions).

¹H NMR of the Polymer:**SEC of Sample:****P8870-StBuAS for SAAS****DSC thermograms for the sample:****Reference:**

S.K. Varshney, P. Kesani, N. Agarwal, J. Xin. Zhang, and M. Rafailovich. Synthesis of ABA type thermoplastic elastomers based on Polyacrylates, *Macromolecules*, 1999, 32,235.